simply be to raise prices in the higher-cost areas that the telephone companies choose not to enter. But this may not be a viable alternative. Operators may not be able to raise prices in those areas without losing more revenue than they gain – either because of competition from DBS or because customers are simply unwilling or unable to pay such higher prices for any multichannel subscription service.

In that case, as Baumann explains, allowing a significant new entrant to cream skim the "high value" areas of a community may threaten the quality – or the continued existence – of cable service in the "low value" areas that the new entrant chooses to ignore. And it may even unfairly threaten the competitive viability of the cable operator throughout the community:

> The incumbent may be able to maintain, but not upgrade, the current level of service in the low value area. Alternatively, the incumbent may not be able to continue to serve all of the low value areas. Finally, the incumbent may be at such a disadvantage relative to the entrant that it will eventually exit the entire franchise area.[67]

In these circumstances, *exempting* new entrants from the buildout and anti-redlining obligations imposed on existing operators would actually pose a greater threat to fair marketplace competition than *imposing* such obligations – especially in a video marketplace in which consumers are already enjoying the benefits of vigorous competition among cable operators and two strong DBS services. And it would also directly undermine President Bush's policy goal of promoting ubiquitous competitive broadband availability throughout the nation, including areas that might otherwise be underserved by 2007.[68] As Baumann points out,

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[67] Id. at 8.

[68] "This country needs a national goal for broadband technology, for the speed of broadband technology. We ought to have a universal, affordable access for broadband technology by the year 2007, and then we ought to make sure as soon as possible thereafter, consumers have got plenty of choices when it comes to purchasing the broadband carrier." Remarks by President Bush, March 26, 2004, http://www.whitehouse.gov/news/releases/2004/03/20040326-9.html.

> [i]f identical regulations are applied to both the incumbent and the entrant, whether both firms survive or only one firm survives, and which one, is left to the competitive forces of the marketplace. Admittedly, the competition in the marketplace is subject to the constraint of universal service, but in the end all potential customers will have the ability to get cable service. Alternatively, if constraints apply only to the incumbent, then which firm or firms survive is not a function solely of the competitive marketplace, but is influenced by the asymmetric enforcement of governmental regulations. And, in the end, it is possible that many fewer customers will get cable service.[69]

IP Video and entry by the telephone companies can enhance consumer choice in an already competitive video marketplace. The Bell Companies certainly have the financial wherewithal to compete everywhere with existing cable operators, and they should have no difficulty obtaining franchises to provide service on the same terms and conditions as those operators. Franchises and build-out and anti-redlining requirements present no significant barriers to their competitive entry. To the contrary, freeing them from such obligations would, as Baumann shows, impose an "incumbent burden" on existing providers – the "opposite of an entry barrier" on the new entrant – which would distort competition and make consumers worse off.[70]

III. WITH A NEARLY $100 BILLION INVESTMENT, CABLE IS A BROADBAND TECHNOLOGY LEADER THAT CONTINUES TO INNOVATE TO MEET THE CHALLENGES OF A FAST-CHANGING AND FIERCELY COMPETITIVE VIDEO MARKETPLACE

As the Commission recognized in the Eleventh Annual Report, "cable companies have invested heavily to rebuild and upgrade cable systems" to offer "more channels of basic and digital cable services, premium movie services, pay-per-view programs, high definition programming, high speed Internet access services, CD-quality music, cable telephony, and more

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[69] Baumann at 8.

[70] Id. at 4.

personalized programming options."[71] With an investment of almost $100 billion since 1996, cable operators have replaced coaxial cable with fiber optic technology and installed new digital equipment in homes and system headends. The fruits of cable's investment in a broadband two-way network are evident in the number of advanced services offered on virtually every cable system today. [72]

The Commission again seeks updated information on cable's advanced services, particularly video-on-demand, high speed Internet, high definition television, and digital voice service. It also asks about the carriage of digital broadcast programming on cable systems. These services are discussed fully below, but it is also worth noting that cable is responding to competition by expanding into new businesses. For example, cable companies are pursuing business and corporate customers, a field long dominated by the Bell and long distance giants. With Internet calling through cable's upgraded broadband lines, cable companies are now able to offer companies comprehensive telecommunications services: phone, TV and high speed Internet connections.[73]

Meanwhile, as noted earlier, cable companies are exploring wireless options through joint ventures with other cable operators or wireless companies.[74] Cable's possible entry as a wireless telecom provider "would be the latest salvo in the increasingly competitive battle between cable

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[71] 11th Annual Report at ¶ 34.

[72] In return for deregulation, the cable industry promised Congress and American consumers that it would provide: (1) facilities-based competition to the telephone companies, and (2) a new generation of advanced information and video services – both of which we have done.

[73] "Not Just TV: Cable Competes for the Office Domain," New York Times, August 3, 2005.

[74] "Cable's Eyes on Wireless Prize," The Wall Street Journal, May 18, 2005.

and its rivals – the regional Bell operating companies (RBOCs) and digital satellite broadcast (DBS) outfits – to market video, voice, and data services."[75]

This activity is indicative of a vibrantly competitive digital video and broadband marketplace.

A. Cable is Leading the Way to the Digital Transition

The cable industry continues to aggressively roll out and market high definition television service to the majority of American households, with a growing array of programming choices. As of January 2005, 92 million U.S. television households were passed by at least one cable system offering HDTV service, which represents all of the top 100 designated market areas (DMAs). Of all DMAs, a total of 184 markets (out of 210) were served by at least one cable system that offers high definition programming. Local cable systems also were carrying the digital signal of 504 unique broadcast stations, a four-fold increase from January 2003, when cable began rolling out HDTV with carriage of 92 such stations.

Cable customers are already enjoying a full complement of digital programming and advanced information services independently of the broadcasters' conversion to digital. Today, more than one-third of U.S. cable customers, approximately 26 million, subscribe to digital cable service, which includes a diverse array of program networks and music channels. And, as discussed below, the advanced features of video-on-demand programming, digital video recording, and enhanced electronic program guides provide digital customers with the convenience to watch programming at a time of their choosing. They also allow cable subscribers to block access to programming they do not want their children or households to see. All of cable's digital services can be enjoyed by consumers with analog TV sets who use digital

[75] Cable's Wireless Dreams; S & P says the industry's aim to add mobile phone service to video, broadband

set-top boxes that convert digital signals to analog. Cable companies are also deploying innovative interactive video services, along with Internet and digital telephony services.

Cable customers with HDTV sets have even more options.[76] They can receive a wide selection of programming transmitted in high definition, including 23 HD cable networks that transmit much of their programming in high definition.[77] In addition, cable operators are now voluntarily carrying the digital channels of a substantial number of over-the-air broadcast stations in addition to those stations' analog signals – either through retransmission consent agreements with individual commercial stations[78] or voluntary initiatives such as cable's recent carriage agreement with public television stations.[79] Significantly, cable's contractual carriage agreement with public television stations was reached through private negotiations – not federal legislation or FCC regulations.

In fact, where broadcasters are currently offering compelling digital content, cable operators are voluntarily agreeing to carry such programming. At present, cable operators have agreed to carry the digital signals of over 500 unique broadcast stations, and this includes not only

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Internet, and VoIP would make for a strong 'quadruple play." BusinessWeek online, December 9, 2004.

[76] The cable industry is rapidly rolling out high definition programming. As of January 1, 2005, cable companies had launched high definition television service on systems passing 92 million homes. At least one cable operator in all of the top 100 markets now offers HDTV, and HD over cable is available in 184 of the 210 U.S. television markets.

[77] The networks include Cinemax HDTV, Comcast SportsNet HDTV, Discovery HD Theater, ESPN HD, ESPN2 HD, FSN HD, HBO HD, HDNet, HDNet Movies, INHD, INHD2, MSG Networks in HD, NBA TV, NFL Network HD, Outdoor Channel 2 HD, Showtime HD, Spice HD, STARZ! HDTV, The Movie Channel HD, TNT in HD, Universal HD, and YES-HD.

[78] As of January 1, 2005, cable operators voluntarily carried 504 digital broadcast signals – a 66 percent increase over the 304 stations carried in December 2003.

[79] On January 31, 2005, NCTA reached agreement with the Association of Public Television Stations (APTS) to ensure that the digital programming offered by local public TV stations is carried on systems serving the vast majority of cable subscribers across the nation. The boards of NCTA, APTS, and PBS ratified the agreement on February 4, 2005.

HDTV signals but also multicast streams. Of course, operators continue to carry the broadcasters' analog channels as well.

- As of May 2005, cable operators were carrying commercial broadcasters' multicast programming in over 50 markets ranging from many of the nation's largest (including at least 7 of the top 10 markets)[80] to numerous small-to-midsized markets across the country. For example, in the Washington metropolitan area, Comcast is carrying WJLA's local Weather Now channel (ABC) and WRC's Weather Plus channel (NBC), as well as WETA's Prime, Kids, and Plus channels (PBS).
- In January 2005, NCTA and the Association of Public Television Stations (APTS) entered into an agreement that ensures that local public television stations' digital programming – including multicast channels – is carried on cable systems serving the vast majority of cable customers across the nation. In April 2005, public television stations serving markets comprising over 80 percent of U.S. TV households and MSOs representing over 80 percent of cable subscribers ratified the agreement, and MSOs are adding digital PTV stations to their channel line-ups.
- Comcast has digital carriage agreements with public broadcasters in at least 45 markets and has reached digital multicast carriage agreements with a growing number of commercial broadcasters for channels that Comcast believes bring value to its customers.
- During the NCAA men's college basketball tournament, CBS stations in a dozen markets offered – and cable operators agreed to carry – extra games on multicast channels.

The vast majority of cable customers have analog television sets, and most of those sets – as in over-the-air households – are not equipped with digital set-top boxes.[81] Today, cable operators provide the analog signals of virtually all local television stations, which can be viewed by all customers – those with and without digital boxes, and those with and without digital television sets. In addition, operators provide the digital signals of some, but not all, broadcast

[80] In at least one additional top 10 television market, cable carried the multicast signal of the recent NCAA men college basketball tournament games.

[81] There are approximately 172 million television sets in the 66 million cable households across the country. 26 million cable homes subscribe to digital service, but not all digital households have digital boxes on all their TVs. This means that there are approximately 28 million analog TVs in digital homes that will require boxes after the transition. If one adds these 28 million sets to the approximately 106 million analog TVs in homes with only analog cable service (41 million), there are a total of around 134 million analog TV sets in cable homes that will require digital boxes in order to get digital service. The cost of deploying 134 million set-top boxes is $9 billion for a simple $67 digital-to-analog box and $29 billion for a $200 interactive digital cable box.

stations – especially those that provide compelling digital programming that is likely to enhance the value of cable service for the growing number of customers with high definition sets.[82]

B. Cable's Video-on-Demand and Digital Video Recorders Put Customer's in the Driver's Seat

As cable operators upgrade their systems with digital and two-way capability, they are offering more sophisticated interactive services. Such services are increasingly putting the control of media directly into the hands of consumers – allowing them to watch what they want, when they want.

With video-on-demand, consumers have virtually thousands of viewing options at their disposal. For instance, Comcast has expanded its library of on-demand programming to approximately 2,000 hours and recently signed a deal with Sony to provide a total lineup of about 100 movies a month from the Sony pictures and MGM libraries.[83] Comcast aims to boost that to 10,000 in the next year.[84] This past March, the company announced that digital cable customers viewed more than 100 million ON DEMAND programs, three times the number of ON

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[82] The Commission requests information regarding the availability and compatibility of customer premises equipment with services delivered over cable systems. In particular, a number of questions are asked about the deployment of CableCARDs, the progress of the bilateral plug and play negotiations, the availability of multistream CableCARDs and the impact of downloadable security on these issues. See e.g., ¶¶ 21, 22, 25, 29, 38-40. Cable operators will be reporting on these and related issues before the end of the year. Reports on CableCARD deployment, multistream CableCARDs, and the status of the two-way negotiations are due the day reply comments are currently scheduled to be filed in this proceeding. While in this NOI the Commission seeks comment on several of these issues from operators other than the six largest who will file the report on CableCARDs, those six serve over 80% of the cable customers in the country and will provide the data the FCC needs to determine that CableCARDs have been a success. In addition, a report on downloadable security is due December 1, 2005 which will likely address the questions asked in this NOI about that issue. For these reasons, rather than prematurely address those issues in these comments, we intend to submit those reports in this docket when they are filed. We also intend to respond to any comments addressing these issues in our reply comments in this proceeding.

[83] "Who's going to win the living room wars?", The Wall Street Journal, April 25, 2005.

[84] "Cable in full flower: On Demand Makes Content Easier to Access – and Ads Easier to Target," The Denver Post, April 11, 2005 at F-01.

DEMAND programs viewed in March 2004, and a 40 percent increase from the fourth quarter of 2004.[85]

The cable industry has a distinct advantage in the video-on-demand marketplace. According to one analyst, "VoD is another arrow in the quiver of cable companies to retain existing customers and keep them from defecting to satellite."[86]

Kagan Research estimates that by the end of 2005, 23.9 million U.S. households will have access to VOD from their local cable provider and that number is likely to increase to 45.6 million by 2009.[87] Analysts expect VOD revenues to approach $1 billion this year and nearly $6 billion by 2013.[88]

Cable companies have accelerated deployment of digital video recorders (DVRs), which enable customers to capture video programming onto a hard drive in the set-top box and pause, fast forward and manage other functions and applications. Cablevision, Comcast, Cox and Time Warner Cable are among the companies that have widely deployed DVRs.

Kagan Research calculates that by the end of 2005, 4.5 million digital cable customers will use a DVR service, an increase of 150 percent from 1.8 million customers at the end of 2004.[89] The direct-to-home satellite industry commands a sizable lead in DVR users, with 3.6 million customers at year-end 2004, but analysts expect the cable industry to aggressively grow its share of the market.[90] Kagan predicts 20 million cable DVR households by 2009, while DBS

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85 "Comcast's Got Game," The Street.com, August 1, 2005.

86 "VoD Squad Takes on Satellite TV," Chicago Sun-Times.com, May 31, 2005, (available at http://www.suntimes.com/output/business/cst-fin-vod31.html).

87 "2005 Broadband Cable Financial Databook," Kagan Research, at 12.

88 "Cable Talks, Wall Street Listens," Broadcasting & Cable, April 11, 2005, at 18.

89 Kagan Research, LLC, "MSOs Fast-Forward DVR Purchases," *Broadband Technology*, May 12, 2005, at 1-2.

90 Id.

providers will have 14.5 million. Overall, the total number of MVPD customers with DVR functionality is likely to grow. The Yankee Group is forecasting 25 million DVR households by 2007 and Forrester Research is estimating 35.7 million DVR households by 2008.[91]

C. Cable is Competing on Speed and Value in the High-Speed Data Services Tug-of-War

Cable's leadership in creating and developing the market for affordable residential high-speed Internet access has led to a profusion of competitive offerings. For instance, the wide-scale deployment of cable modem service has spurred the Regional Bell Operating Companies in recent years to aggressively deploy digital subscriber line (DSL) service. As the first-to-market broadband provider, the cable industry is facing increasing competition from DSL providers, as well as an expanding choice of alternative broadband providers, including wireless, satellite and broadband over powerline.

Overall, the market for broadband continues to expand. As the Commission recently reported, high-speed lines serving residential and small business subscribers increased by 36% during 2004 to 35.3 million lines.[92] Morgan Stanley estimates that in the third quarter of 2005, broadband should be almost exactly 50% of Internet households.[93]

By the end of Second Quarter 2005, cable's high-speed Internet service had attracted 23 million customers (see Chart 2). More than one-quarter of all cable households today subscribe to cable's high-speed data service, and among those cable households with Internet access, nearly

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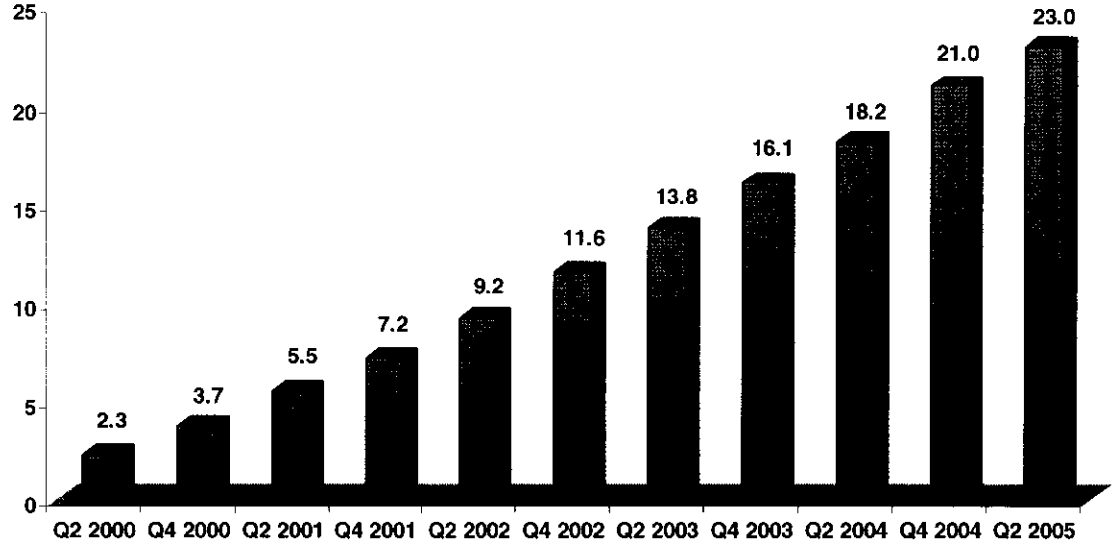
[91] "Satellite, Cable Give DVRs a Boost," Advertising Age, June 27, 2005; "Cable Firms Embracing Digital Video Recorders," Investor's Business Daily.

[92] "High-Speed Services for Internet Access: Status as of December 31, 2004," FCC Industry Analysis and Technology Division, Wireline Competition Bureau, July 2005, at 3.

[93] "Downgrading Cable & Satellite: Content Looks Cheaper on EPS," Morgan Stanley Equity Research, July 20, 2005, at 8.

30 percent are cable modem customers. Cable's broadband services are available to more than 103 million homes, or 93 percent of U.S. households passed by cable (see Chart 3).

Chart 2:
Cable Modem Customers: 2000-2005
(in millions)



Source: NCTA estimates based on company data

The high-speed Internet access market is far from saturated and the cable industry expects continued growth in the future. For the full-year 2004, the Commission reported a 30 percent increase in cable modem connections, from 16.4 to 21.3 million lines, affirming similar estimates from the private sector.[94] Data from Leichtman Research Group reveals total cable modem customers of the top ten multiple system operators grew 28 percent in 2004, from 15.3 to 19.6 million.[95] Morgan Stanley reported a 28 percent increase in cable modem customers last year,

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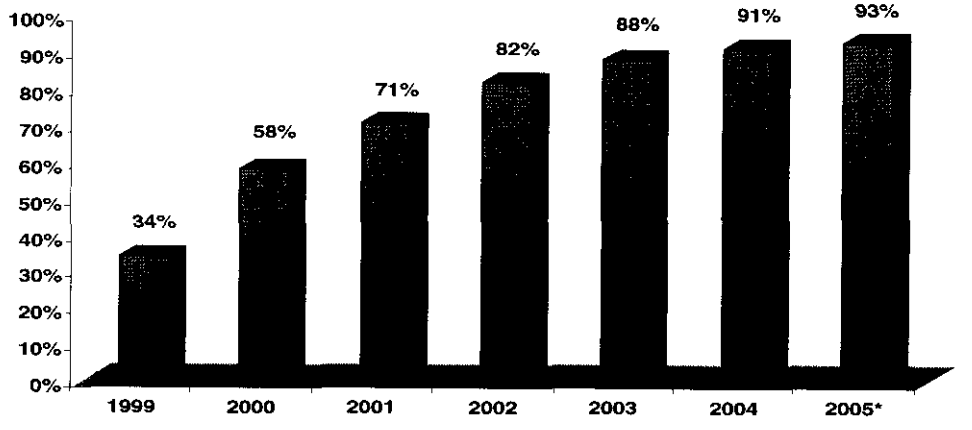
[94] "High-Speed Services for Internet Access: Status as of December 31, 2004," FCC Industry Analysis and Technology Division, Wireline Competition Bureau, July 2005, at 6.

[95] "1Q2005 Research Notes," Leichtman Research Group, Inc., (http://www.leichtmanresearch.com), at 7.

from 15.0 to 19.2 million. The company is forecasting annual customer growth rates of 22 percent for 2005 and 18 percent for 2006.[96]

Chart 3:
Cable Broadband Availability as a Percentage of Homes Passed by Cable 1999-2005



Source: Cable Broadband Homes Passed – Morgan Stanley, "Downgrading Cable & Satellite: Content Looks Cheaper on EPS," July 20, 2005. Cable Homes Passed – Morgan Stanley. Note: *- denotes estimate.

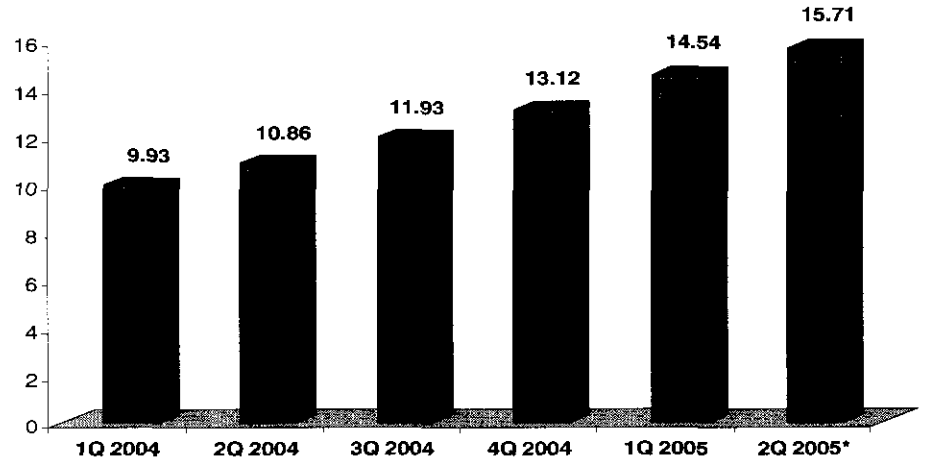
Phone companies remain formidable broadband competitors with their ADSL offerings. Though cable continues to have the largest installed base – 22.2 million lines – compared to the Bells' 13.7 million ADSL lines, the phone carriers have been adding new lines at a furious rate. According to the Commission, advanced higher-speed ADSL lines – defined as 200 Kbps for both upstream and downstream – increased 88 percent during 2004, compared to 36 percent for advanced cable lines.[97] An NCTA snapshot of second quarter data for 2004 and 2005 reveals

[96] "Downgrading Cable & Satellite: Content Looks Cheaper on EPS," Morgan Stanley Equity Research, July 20, 2005, at 29.

[97] "Federal Communications Commission Releases Data on High-Speed Services for Internet Access," Press Release, FCC, July 7, 2005, at 2.

Bell ADSL net additions grew 40 percent, while cable modem subscriptions grew 25 percent.[98] The RBOCs together have been adding about one million ADSL subscribers each quarter (see Chart 4).

Chart 4:
RBOC DSL Subscriber Growth: 2004-2005
(in millions)



Source: "Downgrading Cable & Satellite: Content Looks Cheaper on EPS,"Morgan Stanley, July 20, 2005, at 30; "Bundling and the Battle for Basic," Morgan Stanley, October 12, 2004, at 36. Note: * - estimate.

Cable operators have responded to this competitive marketplace by offering consumers a bundled package of services, which has enabled them to attract new customers and retain existing subscribers. Cable has been promoting increased access speeds, superior content, and other online enhancements.

When cable modem service was introduced in 1999, the majority of customers experienced downstream access speeds approaching 1.5 Mbps. Since 2001, multiple system

[98] NCTA estimate based on data from company reports, Leichtman Research Group, and Kagan Research. Cable modem data based on top 10 cable MSOs. ADSL data based on four Regional Bell Operating Companies.

operators have regularly boosted those speeds at no additional cost. Most operators are now offering 4 to 6 Mbps, with additional pricing plans for speeds in excess of 6 Mbps. For example, Comcast customers in the San Francisco Bay area are paying $42.95 a month for 6 Mbps, a boost from 4 Mbps without a price increase.[99] The cable industry is also focusing on growing the commercial market for high-speed Internet access. Cablevision is marketing 50 Mbps service (expandable to 100 Mbps) for commercial customers in Oyster Bay, New York. [100]

Boosting speeds has not posed any technical problems for operators and the process is neither cost nor labor-intensive. As Cable Television Laboratories, Inc. Chief Technology Officer Ralph Brown recently remarked, "There isn't any equipment they need to add or buy when [cable operators] move from 1.5 Mbps to 3 to 9 to 15."[101] Usually, just a simple software download to existing modems can upgrade the speed capabilities.

To continue improving its high-speed offerings, the cable industry has developed technical specifications that will enable operators to ramp up service speeds significantly. New versions of these specifications combined with dynamic new technology will maximize bandwidth so that high-speed access could increase to 160 Mbps downstream and 60 Mbps upstream.

In addition to speed, cable operators are offering a variety of features (at no additional fee) that increase the value of their high-speed Internet service. These features include integrated security suites, with anti-virus, anti-spyware and firewall protection; pop-up blocking and spam

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[99] "Comcast Plans Free Internet Speed Upgrade," Contra Costa Times, July 14, 2005.

[100] "Cablevision Revs Up 20-Meg Trial," Communications Engineering & Design, September 1, 2005, at 6.

[101] "Adding Speed, With Ease," Multichannel News, July 18, 2005 at www.multichannel.com.

filtering; video e-mail; and specialized content from partners such as Major League Baseball, NASCAR, Disney, and Movielink.

By offering discounts, the Bells are successfully growing the broadband market as dial-up users subscribe to high-speed access. SBC and Qwest, for example, have all launched introductory DSL promotions that lower prices to $14.95 for new customers. Kagan Research reported that "only one-third of SBC's adds in June accepted the $14.95 offer. The other's elected to either take a faster tier or get DSL in a bundle at a different price."[102] For $29.95 a month, Verizon customers receive 3 Mbps downstream and 768 Kbps upstream broadband access when purchased with a voice plan bundle.[103]

Though a smaller subset of the broadband access market, alternative technologies including Broadband over Power Line (BPL), fixed wireless and satellite will continue to make inroads as a viable alternative to DSL and cable modems. BPL service allows the delivery of IP-based broadband using the communications capabilities of the nation's power grid. According to the United Telecom Council, there are a number of trials underway nationwide, and a small number of commercial deployments have been launched. Adding new momentum, three technology behemoths – Google, Inc., IBM Corp., and Motorola, Inc. – recently announced major investments or trials involving BPL.[104]

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[102] "Cable Regains Lead in HSD Net Adds," Kagan Broadband Technology, August 12, 2005, at 3.

[103] "Verizon Online Offers Twice the Speed of its Basic Consumer DSL Service for the Same Low Price," Verizon Press Release, April 4, 2005.

[104] "Are Power Lines the Internet's Future?" The Austin American Statesman, July 17, 2005, at J1.

D. Cable VoIP Primed for Explosive Growth Resulting in Additional Bundle Benefits

Nearly four million customers are taking telephone service from their local cable operator, both traditional circuit-switched telephone service and, increasingly, cable's new Voice over Internet Protocol (VoIP) service. While some cable operators have offered traditional circuit-switched telephone service for years, more recently, many companies have launched VoIP services. Circuit-switched telephony subscribers may be transitioned to VoIP. The two largest operators of the service – Cox and Comcast – will continue to support the roughly three million users in the meantime.

Kagan Research reported significant growth in cable VoIP subscribership for the first half of 2005. Between year-end 2004 and the second quarter of 2005, the industry grew from 587,000 to 1.2 million customers, a growth rate of 105 percent.[105] Kagan estimates the penetration rate for cable VoIP and, to a lesser extent circuit-switched telephony, will reach 18 percent of occupied U.S. households by the end of 2009, while 88 percent of homes passed by cable will be able to receive VoIP service the same year.[106] Morgan Stanley reported that telephony homes passed as a percentage of total homes passed should reach 90% by 2007.[107]

Both Cablevision and Time Warner have established a strong beachhead in the VoIP marketplace, and Comcast is now in full deployment mode. Those operators, along with Charter, Insight, Bright House and Bresnan are effectively competing against a range of independents

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[105] "IP Voice Deployments Provide a Study in Contrasts," Kagan Broadband Technology, Aug. 12, 2005, at 9.

[106] "IP Voice Posed to Become Major Player," Kagan Broadband Technology, February 18, 2005, at 1.

[107] "Downgrading Cable & Satellite: Content Looks Cheaper on EPS," Morgan Stanley Equity Research, July 20, 2005, at 35.

including Vonage, AT&T, Packet8, and Lingo, as well as the RBOCs. During the second quarter, Time Warner continued its strong growth in new customers, adding 242,000 VoIP users, far outpacing Wall Street analyst estimates of 180,000 additions.[108] Cablevision, Comcast and Charter added 142,000 combined customers during the same quarter.[109]

Cable's VoIP deployments have coincided with a decrease in RBOC subscriber lines. As one Sanford Bernstein analyst noted, the four Bell's higher retail and wholesale line losses over the last four quarters have closely mirrored "the acceleration in VoIP."[110] Additionally, VoIP is having a positive impact on the other service offerings in cable's "triple play" – video and high speed data. According to reports, operators offering VoIP are experiencing lower churn rates for basic cable and increased growth in high-speed Internet subscribers. Cablevision, Cox and Time Warner all exhibited faster growth rates – almost 20 percent – in their high-speed access businesses that those operators not offering voice service.[111]

Pricing plans for VoIP services vary by operator, but most are offering discounts when bundled with other services. For instance, Comcast and Time Warner customers currently subscribing to digital video and data are charged roughly $40 monthly for VoIP. For non-subscribers, Comcast charges $54.95 for Digital Voice, while Time Warner charges $49.95 for Digital Phone.[112] Cablevision customers already subscribing to digital video and data are charged $29.95 for Optimum Voice and $34.95 monthly as a stand-alone service.[113]

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[108] "Phone Counts Soar," Multichannel News, August 8, 2005, at 1.

[109] Data based on Company 10-Q financial reports.

[110] "North American MSOs Top 1 Million Mark for VoIP Subs," Cable Digital News, September 2005.

[111] Id.

[112] "Phone is Comcast's Next Big Engine," Multichannel News, January 17, 2005, at 1.

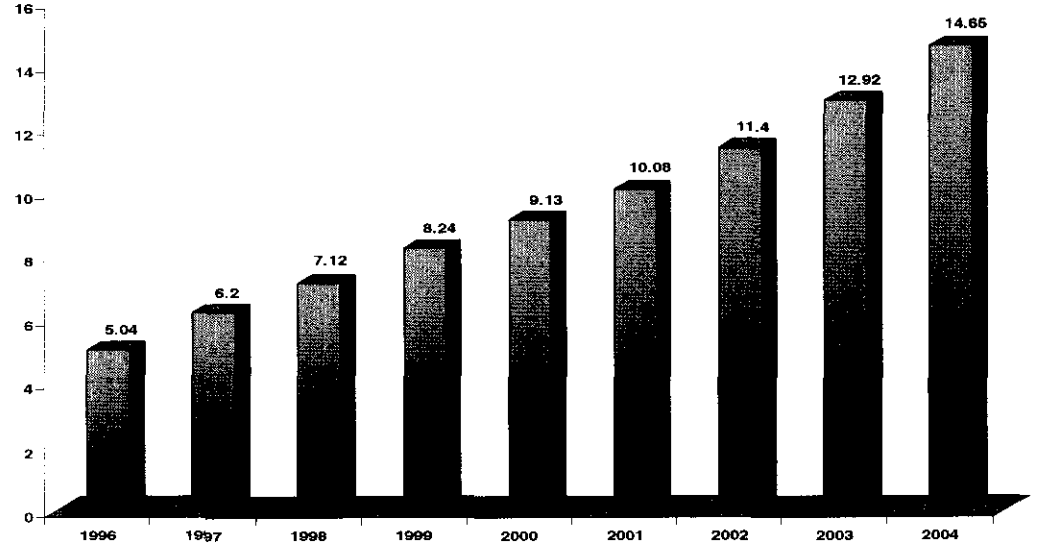
[113] Id.

IV. CABLE CONTINUES TO INVEST IN ORIGINAL, COMPELLING PROGRAMMING TO WIN AND SUSTAIN CUSTOMERS IN A HIGHLY COMPETITIVE VIDEO MARKETPLACE

The Commission asks about the status of video programming networks, including children's programming and locally-originated programming. The cable industry continues to invest in general interest and niche programming to attract customers.

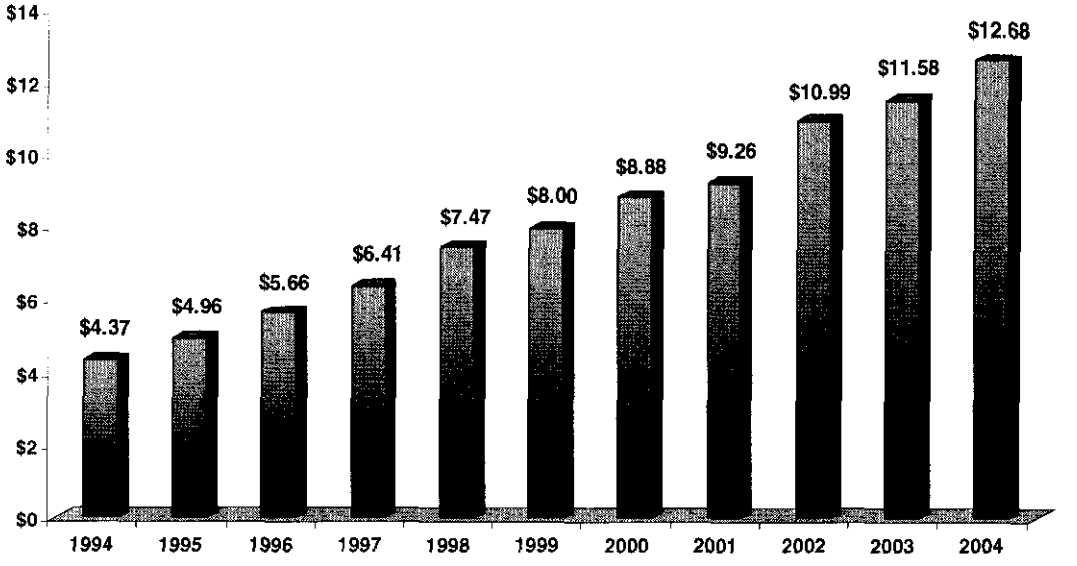
Programming Investment. Cable's original, compelling, and high-quality content is the direct result of increased investments by both cable networks and operators. In 2004, cable networks invested more than $14.65 billion in producing new programming [See Chart 5], while cable operators invested $12.68 billion in quality programming for customers [See Chart 6]. As noted above, with the deployment of services such as VOD and digital video recorders (DVRs), viewers can watch their favorite programming at their convenience.

Chart 5:
Cable Networks' Programming Expenditures: 1996-2004
(In Billions)



Source: Kagan Research, LLC.

Chart 6:
Cable Operators' Programming Expenditures: 1994-2004
(In Billions)



Source: NCTA estimate based on Kagan Research, LLC. and U.S. Copyright Office

Programming Quality. Cable is increasingly recognized as the premier outlet for high-quality, cutting-edge programming by television critics and viewers. For example, the 56th Annual Primetime Emmy Awards in September 2004 marked the first time that cable networks surpassed the broadcast networks in honors received, with 11 cable networks collectively garnering 50 awards compared to the broadcast networks' 37 awards.

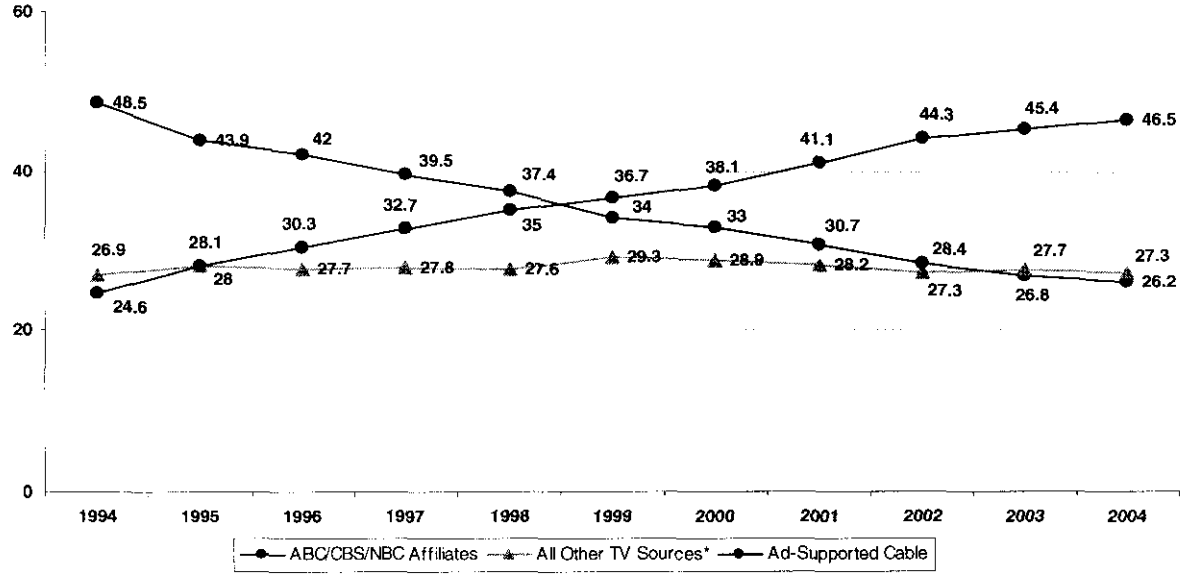
- In January 2005, FX, Showtime and HBO won Golden Globe Awards.
- In April 2005, cable organizations won 12 George Foster Peabody Awards out of 32 awards granted.
- HBO and ESPN each won five Sports Emmy Awards in April 2005, followed by ESPN2, NFL Network and TNT tied with one award each.

Programming Viewership. More viewers are tuning into cable's diverse offerings than ever before, even compared to the collective viewership of the seven national commercial broadcast networks (ABC, CBS, NBC, FOX, UPN, WB & PAX).

More than half of all primetime television viewers watched ad-supported cable networks during the official 2004/2005 TV season (September – May), the second consecutive time that cable has topped all national broadcast networks combined during an official season. Cable-plus households tuned in on a weekly basis to more than 35 hours of ad-supported cable programming versus an average of 26 hours per week for all commercial broadcast programming combined.

An analysis of Nielsen data by the Cabletelevision Advertising Bureau (CAB) shows that for the official 2004/2005 TV season, ad-supported cable networks outpaced the "Big 4" (ABC, CBS, NBC, FOX) broadcast networks on a total day basis by 17.7 share points – with cable posting a 54.4 share to broadcast's 36.7 [See Chart 7].

Chart 7:
Viewing Shares Shift to Cable: 1994-2004
(Total Day Shares)

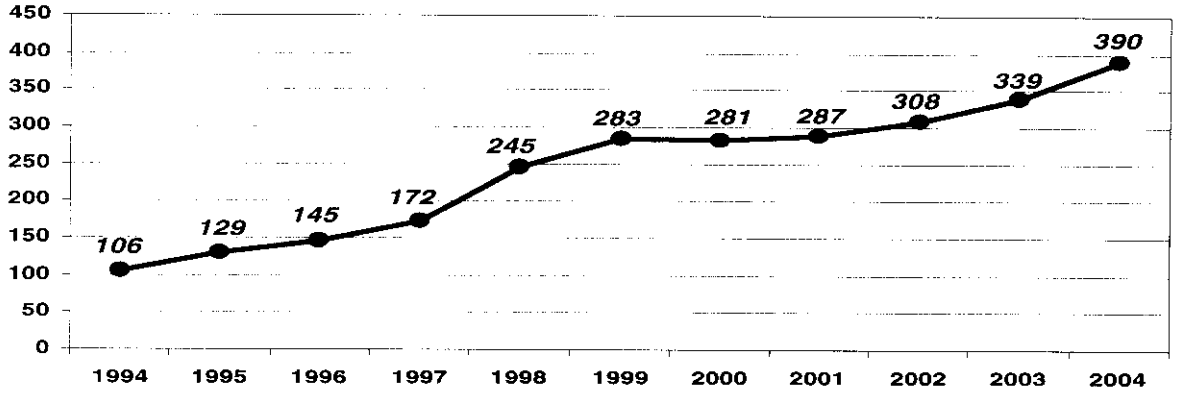


*All Other TV includes Independents, Pay Cable, FOX/WB/UPN/PAX Affiliates, PBS and all other cable

Source: Cabletelevision Advertising Bureau, 2005 Cable TV Facts.

Programming Choice. Cable's investments have resulted in a growing number of cable networks. As the Commission previously reported, the number of national cable networks increased from 145 in 1996 to 390 by year-end 2004 – growth of 169 percent in eight years [See Chart 8].

Chart 8:
National Video Programming Services: 1994-2004



Source: 1994-2004 Annual Report on the Status of Video Competition," FCC; 2005: NCTA Estimate

Children's Programming. Cable networks are continuing to provide many hours of quality programming suitable for children and the whole family. In addition to the positive viewing options that are provided, the industry has taken steps to help parents manage what their families watch. Free blocking technology is available, and programming networks have enhanced the on-screen ratings identification.

Basic cable networks such as ABC Family, Animal Planet, Boomerang, Cartoon Network, Discovery Kids, Disney Channel, The Hallmark Channel, Nickelodeon, Nickelodeon GAS, Noggin/The N, and Toon Disney, as well as premium networks such as HBO Family, Showtime Family Zone, Starz Kids & Family, and Encore Wam continue to attract a growing audience share of children and families. Total day viewing by kids (ages 2-11) of advertising-

supported cable networks increased from a 28.3 share in 1993/1994 to a 56.4 share during the 2004/05 official TV season.

CONCLUSION

One thing remains constant in the video marketplace from year to year, and that is the persistent growth of competition and choice for consumers. Beyond that, however, nothing stays the same. New products and services and new technological innovations appear every year. And, although the Commission has recognized that choice and competition have already become the hallmark of this dynamic marketplace, new competitors continue to enter and offer new alternatives.

This year, the usual array of new technologies and services is accompanied by the long promised entry of the Bell Operating Companies. As these large, well-financed companies join the fierce competitive battle for video customers, consumers will benefit – as long as the marketplace is not distorted, and broadband deployment to all segments of the population is not thwarted, by unfair regulatory advantages and disadvantages.

That marketplace has been working beyond expectations to foster broadband competition, with benefits that are hardly limited to video services. The Commission once again has very good news to report to Congress.

Respectfully submitted,

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September 19, 2005

Attachment A

The Adverse Effects of Asymmetric Build-Out Requirements in Cable Television

Michael G. Baumann

September 14, 2005

Executive Summary

An incumbent cable operator typically has an obligation to serve all customers in its franchise area. That duty requires the operator to expand its capacity to meet the growth and location of customer demand and has necessitated substantial capital expenditures as cable operators have updated their systems. An incumbent burden is said to exist if incumbents face costs of regulation that are not imposed on entrants. If a regulator allows entry by competing firms that are not subject to the same regulation as the incumbent, such asymmetric entry may severely reduce the incumbent's ability to abide by its franchise requirements.

If asymmetric entry were allowed it is likely that some groups of consumers, particularly those in the low value areas, would be harmed. Given the variation of conditions across franchises it is difficult to predict exactly what would happen to an incumbent firm. The incumbent may be unable to upgrade and expand, or even to maintain, its service in low value areas.

Asymmetric entry may allow some consumers to make choices about cable services that they find economically attractive, but may also produce results that are undesirable with respect to broader social goals. Symmetric regulation, or a revision of the incumbent operator's obligations, is required. Otherwise, the incumbent operator is at a disadvantage when competing with the entrant and has a reduced incentive to maintain, upgrade, and expand its cable system.

The Adverse Effects of Asymmetric Build-Out Requirements in Cable Television

Introduction

Verizon and SBC are in the process of launching new fiber-based video services that will compete with incumbent cable operators. Both of these telecommunications companies argue that the deployment of their services will be delayed if they are subject to the same regulations as cable operators. They argue that since they already have been granted franchises to offer telephone service they should not be required to obtain second cable franchises. Even when these companies recognize the need to deal with local cable franchising authorities, they nonetheless argue that they should not be subject to the same obligations as incumbent cable operators.

Existing franchise agreements generally require a cable system to serve most or all of the households in its franchise area. If franchising authorities maintain this universal coverage condition on incumbent cable systems but not on new entrants, existing cable systems will encounter a competitive disadvantage, known as incumbent burden.[1] This burden could limit the incumbent's ability to respond to price competition from the entrant. Moreover, applying different rules to entrants will potentially limit an incumbent operator's incentive and ability to maintain and upgrade its cable system. It may no longer be profitable for the incumbent to incur the costs of upgrading service if it is required to upgrade the entire franchise area while the entrant does not face a similar requirement.

Under asymmetric requirements, consumers in the entrant's service area may initially have a choice about which cable service they find economically attractive, but in the longer term

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[1] J. Gregory Sidak and Daniel F. Spulber, *Deregulatory Takings and the Regulatory Contract*: Cambridge University Press (1997), pp. 4-5, 30.

there could be undesirable effects with respect to broader social goals. If regulators want to maintain universal service, they will have to impose the requirement on everybody.

Franchise Requirements

The obligation to provide cable service to most or all households within a franchise area is known as a universal service requirement. Such requirements are not unique to the cable industry, and historically have been applied to other industries such as electric power and telecommunications. There are several reasons why governments and regulators may want to pursue the goal of universal service—reasons of equity, of economic development, and possibly even of economic efficiency (if there are sizeable network externalities).

Generally, in order to attain the objective of universal service, the incumbent firm is required to serve all of a given area, an obligation known as a coverage constraint. In the case of cable service, the coverage constraint is all or most of the entire franchise area. Typically, pricing restrictions are also imposed on the incumbent firm. Constraints on prices may take the form of uniform pricing, which requires a firm to offer its services at a uniform price to all its customers. Any losses a firm incurs because of these restrictions are commonly financed by internal cross-subsidies.

Cross-subsidization comes in many forms, including rate averaging where the costs of providing service differ based on location. For example, consider a firm that faces two types of consumers, high-cost (say rural) and low-cost (say urban) customers. Economic efficiency is maximized when each consumer type pays a price that equals the marginal cost of serving that consumer. If a coverage obligation is imposed along with a uniform pricing constraint, the observed price will be some average of the prices that would be charged each type of consumer. Rural customers will face a price below what they would otherwise be charged, while urban customers will pay a somewhat higher price. The universal service constraint

creates some loss in efficiency due to the distortion in prices, and this loss should be balanced against the value that the public authority places on universal service.[2]

With cable systems, it is often the case that there are differences in the costs of serving different geographic areas. While programming costs per subscriber do not vary by area, the per-subscriber cost of maintaining the physical plant may be higher in some areas. In addition, due to variations in household income and demand, certain geographic areas may generate larger revenues per subscriber as a result of the programming and other services purchased. The revenues from subscribers in these high value areas may be of critical importance to the cable operator in covering the costs of upgrading and expanding the entire cable system. In effect, the revenue from these areas cross-subsidizes the cost of upgrading other areas.

Incumbent Burden

One of the effects of cross-subsidization is that it allows new entrants to a market to "cream skim" the low cost (or high value) customers, leaving the incumbent with the obligation to serve all customers. An incumbent burden is said to exist if incumbents face costs of regulation that are not imposed on entrants. An incumbent burden is the opposite of an entry barrier, in that an incumbent burden facilitates entry even if such entry would be uneconomic in the absence of regulation. Stated differently, incumbent burdens are analogous to the phenomenon of raising rivals costs, except that the rival whose cost is being raised is the incumbent rather than the entrant.[3]

The effect of imposing universal service obligations on service providers, and the impact of opening those services to entry and competition, has been studied extensively in the economics literature.[4] Entry and competition may limit the ability of the incumbent operator to

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[2] H. Cremer, F. Gsami, A. Grimaud and J.J. Laffont, "Universal Service: An Economic Perspective," *Annals of Public and Cooperative Economics*, 72:1 (2001), pp. 21.

[3] Sidak and Spulber, pp. 30-31.

[4] See, for example, Barbara Cherry and Steven Wildman, "Unilateral and Bilateral Rules: A Framework for Increasing Competition While Meeting Universal Service Goals in Telecommunications," Chapter 3 in Barbara

use cross-subsidies. Charging uniform prices may open the door to "cream skimming," and may threaten the viability of the incumbent operator.[5]

Entry Assuming Uniform Pricing

If there is no elimination of the uniform price requirement, the incumbent cable operator cannot lower price to compete with the entrant in just those areas the entrant chooses to serve. The incumbent may be able to respond to entry by lowering its overall price somewhat, but it is limited in its ability to compete. The incumbent's price will be a compromise between its desire to have a low price in certain areas in order to compete with the entrant and to have a higher price in areas where there is no entry. Therefore, the price of the incumbent will in general be higher than that of the entrant.[6] In contrast, the entrant can undercut the incumbent's pricing and provide the same level of service as the incumbent in certain low cost (or high revenue) areas. An entrant would certainly be expected to take into account costs and potential revenues when deciding which geographic areas to enter. New entrants will first target those low cost (or high revenue) customers.

Under this scenario, it has been argued that all consumers are better off because the incumbent's price is lower everywhere and some consumers have the added choice of subscribing to the entrant's service.[7] While these commentators note that there is a decrease in

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Cherry, Steven Wildman, and Allen Hammond IV, eds., *Making Universal Service Policy: Enhancing the Process Through Multidisciplinary Evaluation*, Lawrence Erlbaum Associates: Mahwah, New Jersey (1999); J. Gregory Sidak and Daniel F. Spulber, *Deregulatory Takings and the Regulatory Contract*: Cambridge University Press (1997); H. Cremer, F. Gsami, A. Grimaud and J.J. Laffont, "Universal Service: An Economic Perspective," *Annals of Public and Cooperative Economics*, 72:1 (2001), pp. 5-43, and T. Valletti, S. Hoernig, and P. Barros, "Universal Service and Entry: The Role of Uniform Pricing and Coverage Constraints," *Journal of Regulatory Economics* 21:2 (2002), pp. 169-190.

[5] Cremer, Gsami, Grimaud and Laffont, p. 29.

[6] Given the obligation and costs incurred to serve all households, the incumbent may not have the ability or the incentive to lower its price at all.

[7] See, for example, "The Consumer Welfare Cost of Cable 'Build-out' Rules," Phoenix Center Policy Paper Number 22, July 2005. In an effort to show that uniform build-out requirements are harmful, the paper at one points cites an FCC finding that the "local franchise process is, perhaps, the most important policy-related barrier to competitive entry in local cable markets." The issue being discussed relates to exclusive franchise contract

the incumbent's profits after entry, they fail to note that the lower profits will diminish the incumbent's ability and incentive to maintain and upgrade service in the less profitable areas.

Even though the incumbent's cable system may already be built out, the system cannot remain stagnant. It requires upgrades, maintenance, and expansion where population growth occurs. It may not be economically viable for the incumbent to upgrade, maintain, and expand its cable system's infrastructure if regulators allow cream skimming. Applying different requirements to entrants will change the incumbent's incentives and may jeopardize the financial solvency of the incumbent.[8] Entry may eliminate the incumbent's ability to offset losses in low-revenue areas with revenues from high-revenue areas. Going forward, the incumbent may not be able to profitably upgrade its system and continue to meet its coverage requirement. High cost, low revenue areas may well not be provided with cable service. If there is value to having cable service universally available, then this value will be lost.

Entry with Non-Uniform Pricing

The belief that entry will lower prices to all subscribers is based on the assumption that the incumbent will maintain a uniform price. However, following entry, the incumbent may be able to establish that one of the effective competition criteria has been met, and that it is no longer subject to the uniform pricing requirement. Of course, the incumbent may still elect to market its services using a uniform price even without a uniform pricing requirement. This decision will depend upon several factors including the extent to which the entrant overbuilds the franchise area, the entrant's price, and the cost of maintaining separate pricing schedules.[9]

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rules, not build-out requirements, and the FCC goes on: "Recognizing the potential barrier that franchising poses, Congress, in order to further competition in the cable industry, prohibited the 'unreasonable' denial of a competitive franchise in the *1992 Cable Act.*" *In re Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992, Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming*, CS Docket No. 94-48, Appendix H at ¶ 43 (released September 28, 1994).

[8] Sidak and Spulber, p. 5.

[9] For example, advertising and marketing are likely to become more difficult, and potentially more costly, if the incumbent decides to offer different prices. The incumbent may choose to not use franchise-wide advertising to

If the incumbent decides to market its service using different prices, then the price charged in the area served by the entrant will be lower than it would have been if the incumbent continued under uniform pricing. By the same token, the price in other areas of the franchise will likely be higher than if the incumbent continued under uniform pricing after entry.[10] This is because the optimal uniform price lies between the optimal discriminatory prices whenever demands in the different areas are independent.

The exact price in the non-overbuild area will depend upon the cost of serving that area (e.g., programming and maintenance costs); the elasticity of demand in that area, which depends upon factors such as income; and other options available, such as DBS. It is certainly possible that the price in the non-overbuild area will be higher than the pre-entry price. In that case, entry will increase the price to some consumers. Nonetheless, the incumbent's ability to cross-subsidize less profitable areas will be reduced, as will the incumbent's ability and incentive to maintain and upgrade service those areas.

The Fate of Universal Service

The regulatory environment affects incentives for cable operators to make future investments in system maintenance and upgrades. The regulatory environment can also affect the outcome when a cable franchise comes up for renewal.

For a regulation such as universal service to be sustainable in the long run, it must be applied symmetrically. If not, the advantaged firms will likely drive out the other firms.[11] Since cross-subsidies embedded in current prices cannot be maintained under asymmetric regulations,

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advertise a price and may not be able to offer franchise-wide incentives. While the incumbent could engage in targeted marketing to those areas served by the entrant, or identify customers and the rate they should be charged based on their address, it would have to maintain and update a database of areas served by the entrant as the entrant continued to roll out service.

[10] Mark Armstrong and John Vickers, "Price Discrimination, Competition and Regulation," *The Journal of Industrial Economics*, XLI (4) (1993), pp. 335-359, at 341.

[11] Cherry and Wildman, p. 47.

cream skimming makes the original regulatory model unviable. In other words, if you want universal service then you may have to impose it on everybody. Otherwise you may end up with some competitive areas but with other areas not being served.[12]

Without the ability to finance the cross-subsidies needed to support the low value areas, the incumbent's situation has to change. The actual outcome will depend on the degree to which the incumbent's ability to subsidize the low value area is reduced and what, if any, regulatory relief is provided. While one cannot predict with certainty what will happen given the variation in conditions across franchises, some groups of consumers, particularly those in the low value areas, will likely be harmed in the long run.[13]

The incumbent may be able to maintain, but not upgrade, the current level of service in the low value area. Alternatively, the incumbent may not be able to continue to serve all of the low value areas. Finally, the incumbent may be at such a disadvantage relative to the entrant that it will eventually exit the entire franchise area.

If identical regulations are applied to both the incumbent and the entrant, whether both firms survive or only one firm survives, and which one, is left to the competitive forces of the marketplace. Admittedly, the competition in the marketplace is subject to the constraint of universal service, but in the end all potential customers will have the ability to get cable service. Alternatively, if constraints apply only to the incumbent, then which firm or firms survive is not a function solely of the competitive marketplace, but is influenced by the asymmetric enforcement of governmental regulations. And, in the end, it is possible that many fewer customers will get cable service.

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[12] It has been argued that a "build-out" requirement may deter entry in certain instances. If true, that is a strong demonstration of the cross-subsidization necessary to maintain cable service across the entire franchise area. The point here is that Congress has to weigh the potential impact of a coverage constraint on entry against the desirability of universal service.

[13] To the extent that the incumbent raises rates in the non-overlap area, some group of consumers may be harmed in the short run as well.

Having a different set of rules for entrants will also limit what franchise authorities can expect to negotiate in future franchise renewals. Incumbent cable operators will be less willing to pay franchise fees; to provide public, educational, and governmental channels; and to provide financial support for those channels. Indeed, such an unanticipated and asymmetric application of the rules for entrants may constitute a confiscation or taking by the government.